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ABSTRACT

Developing a course for online study by off-campus students requires a major change of approach to teaching and learning. This study outlines the constructivist theoretical basis and the approach to teaching applied in the development of a humanities course. The study includes analysis of the turning points in the students' learning as identified in asynchronous discussion postings and evaluation feedback from a post-course questionnaire. Analysis of discussions and student feedback are used to demonstrate student learning and attitudes to the new mode of study. (Contains 11 references and 2 tables.) (Author)

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Turning Points: learning from online discussions in an off-campus course

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Abstract

Developing a course for online study by off-campus students requires a major change of approach to teaching and learning. This study outlines the constructivist theoretical basis and the approach to teaching applied in the development of a humanities course. The study includes analysis of the turning points in the students' learning as identified in asynchronous discussion postings and evaluation feedback from a post-course questionnaire. Analysis of discussions and student feedback are used to demonstrate student learning and attitudes to the new mode of study.

Introduction

Transforming a traditional course to an online offering to off-campus students requires a reconsideration of the approach to learning and teaching. Using online discussions may be a new experience for both teachers and students. Consequently, learning new ways of interacting via an unfamiliar medium may be a major part of doing the course, and the student has a few hurdles to jump over before learning the course topic can begin.

This paper considers theoretical aspects of online learning in relation to the design, development, and implementation of an online course. The project began with a need to offer the course to off-campus students. The course requires the students to analyze art and literature to identify the influences of culture and ideology on perception. An important aspect of the teaching and learning is the development of the student's ability to analyze issues, compare and contrast different art works and art forms, and to synthesize a level of understanding and a new perspective. The major requirement of the course is the development of a specific set of higher-order cognitive abilities. The online courseware and the learning and teaching strategy were developed to support this particular type of student learning.

Online teaching and learning

Research on issues relating to online teaching and learning reveals a number of issues that are critical to the tasks of design, development and teaching of an online course. Major issues that must be critically examined in relation to current research include:

- Using online technologies to enhance student-centered approaches to teaching and learning to ensure high quality learning outcomes;
- The use of online discussion to support teaching and learning;
- Providing effective support mechanisms for off-campus students.

The following sections will examine these issues to identify the key points from current research that are important for online course design.

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Online technologies for learning enhancement

In a situation in which a course is offered entirely online the application of the online technologies has two critical roles: to enable an effective teaching and learning approach by supporting and enhancing the essential teaching and learning processes, and to make the course accessible for the off-campus student. From an instructional design perspective it is critical for the design of the course materials to be based on sound educational theory. The constructivist approach to teaching and learning has been developed to empower students to attain higher-order levels of understanding and the ability to work with complex issues (Hannafin & Land, 1997). An online course in which students are engaged in exploring to find new meanings and to engage in knowledge construction can be considered to be a constructivist learning environment (Jonassen, 1999).

To enable the most effective knowledge construction the student must engage in learning activities that foster the desired learning outcomes. Learning activities should be structured to actively engage the learner in higher-order thinking and learning by analyzing topic material, comparing alternative opinions and perspectives, and synthesizing a new level of understanding and awareness. Biggs (1999) describes as 'alignment' a process of: formulating learning outcomes that reflect the appropriate level of knowledge and skill; designing learning tasks that will foster knowledge construction and skill development; and setting assessment tasks that require the student to apply the appropriate level of knowledge and skill. To achieve this, learning tasks and assessment tasks are either the same task, or closely related. Collaborative work with other students and the teacher, possibly in the form of collaborative assessment tasks, should be a part of the learning process as this fosters deeper learning outcomes (Biggs, 1999).

The design of the online learning environment needs to be structured to support the most effective learning activities. In an online course, critical considerations are the way that the course materials support the student to know how to use the courseware, how to find the learning resources, how to access guidance about coming to an understanding of the course topics, and how to use the communication systems. The structures to achieve this can be conceptualized as tools, such as cognitive knowledge construction tools, or communication tools (Jonassen, 1999). Student guidelines can be considered as scaffolding, or supports that can be provided where necessary and removed when the students have attained a level of ability and no longer need them. Important types of scaffolding are:

- Conceptual – guiding the learner in what to consider
- Metacognitive – how to think during learning
- Procedural – how to use the features
- Strategic – how to analyze and approach learning tasks

(Hannafin, Land, & Oliver, 1999, p. 131).

In the instructional design process it is important to ensure that these supports are in place and accessible.

Online discussions

A key element in a constructivist approach is active learning through discussion and sharing of ideas. Laurillard (1993) outlines a process of discussion, adaptation, interaction, and reflection that represents an exchange of ideas that is essential before cognitive change can occur. This process has a strong social element, as it is through interaction and sharing that a sense of a learning community is created and a high level of engagement with the learning task occurs. Learning is seen to revolve 'around learners' conversations about what they are learning, not teacher interpretations' (Mills & Cottell, 1998, p. 229). In this context, group activities are considered to develop generic skills that are transferable to other situations, such as communication, negotiation, and interpersonal skills, and to enhance learning leading to deeper learning outcomes (Morris & Hayes, 1997).

In the context of online learning, discussion and interaction occur using online conferencing tools. These tools are considered to be some of the essential 'cognitive tools' provided by a computer-supported learning environment to aid knowledge-building through sharing ideas and collaboratively

constructing knowledge (Jonassen, 1999). Online discussions are applied to enable the cognitive processes described above to occur in an online environment. They should not, however, be seen as a direct equivalent of group discussions in a classroom. Asynchronous online conferences are conducted in writing, which changes the nature of the discussion. Comparative research indicates that while online discussions may be less spontaneous than the classroom equivalent, they are more reflective and often demonstrate a higher quality of learning as a result (Newman 1997). Consequently while the use of online conferencing is growing as a method of supporting off-campus students it is also being used in conventional on-campus courses (Romiszowski & Mason, 1996).

As online discussion is new to many teachers it is appropriate for online teachers to consider appropriate methods for facilitating teaching and learning in this way. Studies of courses in which an online discussion is an optional extra without teacher involvement often report some shortcomings in student use of the discussion. To use online discussion as an essential element in the learning process an appropriate level of involvement by the teacher is essential (McAlpine, 2000).

Salmon (2000) presents a five-stage model for the development of student ability to engage with online discussions. She describes the teacher's role in an online discussion as 'e-moderating'. In this role the teacher must ensure that the students move through the stages of:

- Access and motivation
- Online socialization
- Information exchange
- Knowledge construction
- Development.

Salmon recommends that at the early stages of an online discussion the e-moderator needs to provide online activities that will facilitate the student's ability to manipulate the conferencing tools and to develop knowledge by exchanging and expressing ideas through the online discussion process. It is only when the students have reached the fourth and fifth levels of ability that the students are able to engage in the type of knowledge construction through dialogue that is the goal of the learning activity.

Review of theory

The use of online technologies to promote knowledge construction and active learning requires a range of critical supports and guidelines for learners. They need to know how to use the online courseware and where to find the necessary tools and resources. A critical tool is the online discussion. Through this means the learners can be guided in how to share ideas and work with other learners, and how to develop their understanding of the topic. A staged process beginning with simple tasks for online discussion building to more complex ones is helpful to learners as they come to terms with a new mode of study.

The Course

The course on which this study is based was designed as part of a UNSW initiative to encourage online teaching in General Education. General Education is a requirement by UNSW that all students take some courses in disciplines outside their faculty, to broaden their education and introduce them to forms of knowledge and styles of thinking outside their normal study.

The course is called 'Seeing Australia', an examination of the ways in which Australia has been represented through its history in different modes of cultural production. The content addresses various forms of written and visual representation, including fiction, poetry, non-fiction, painting, photography, and prospectively, film and television. The learning outcomes of the course involve high level cognitive and interpretative abilities. At its completion the students should not only be able to identify various ways of representing Australian place and society, and to distinguish between two predominant traditions of 'seeing' Australia, but also be able to recognize that 'seeing' itself is not a simple 'natural' activity, but based upon cultural assumptions and traditions that largely go unnoticed.

The course was run for the first time on a trial basis in the second semester 2001. For this trial a small, totally external, student cohort was selected. Nine students were Singaporean Chinese enrolled in an

external Safety Science degree at UNSW, one was an accounting student from rural NSW. None had taken a humanities subject before. These students were relatively familiar with WebCT, but had not previously engaged in external study that used online technologies as the main focus for learning activities.

Course Content versus Learning Outcomes

The course was divided into Six Modules containing topics that approximated a weekly schedule. Once the students (eventually) came online the introductory module, involving their 'seeing' of their own neighbourhood and of Australia worked well. However, it quickly became clear that the students were not able to maintain a weekly schedule of topics as might be demanded in a face to face course. This immediately suggested that the online format provided a ready diagnosis of student progress, otherwise unavailable if they had sat quietly and uncomprehending in an on-campus class.

The most interesting outcome was the discovery that course content could be sacrificed in favor of the learning outcomes. Although the course was not structured according to a progressive format, in which the student could only move ahead once a topic had been mastered, it was clear that there was no point moving forward unless they had fully grasped the conceptual skills involved in a module. By privileging the learning outcomes over content, four topics in a module could be reduced to three, or even two, in practice, although the content was available in the Reader for the better students. This meant that difficult theoretical topics were engaged by students with no background, by ensuring that they could work at the issues through discussion. In the workshops a certain momentum built up so that even slower students became engaged with the more difficult topics by entering into the discussion. Conversely, it was clear that once a new topic began it took some time to build up momentum. In effect, it became *necessary* for the content to be reduced so that the learning outcomes could be achieved by all. One positive corollary of this apparently slow rate of progress was that the online delivery of content, particularly of paintings and images, allowed the students considerable time for study and reflection at their leisure.

In addition to the slower rate of progress, it was clear that some issues of cultural analysis were simply too difficult for students of non-English speaking background with no experience in the Humanities. Nevertheless, by maintaining a clear focus on the learning outcomes, these problems could all be circumvented. Whereas a concentration on the content might have suggested that the course was falling short of its aims, it was clear that not all conceptual issues or forms of content were necessary for the skill-based learning outcomes to be reached.

Diagnosis of Learning

The discussion provided a ready indication of the degree to which students had grasped the conceptual point or the extent to which they needed to be encouraged to progress. The following comment is from a slower student who is entering a discussion about Oliver Sacks' story "The Man Who Thought His Wife was a Hat" which touches on the neurological bases of seeing as an introduction to the ways in which ways of seeing can vary.

> Hi Bill I am a down to earth person and believe in seeing with my own eyes. In my opinion, Dr P can be describe as followed: Like most musician and painter, he is a man with creative mind as shown in his previous painting work and his love on music. Most people see with their eyes, but after reading his story, I found that one can also see with their ear and nose. In the story 'journey to the west', I remember the monk preach his followers to see with their heart. At that time, I thought it was only a story, but now I found that in real life, they are actually people seeing things in another angle. In Dr P case, Music is the whole world to him. His love for music is so great that he can teach music to his student till the last day of his life. That make me wonder how powerful is our mind.

Here we find a student at an interesting juncture between his understanding of himself as 'a down to earth person' and therefore not amenable to exotic ideas about seeing, and his beginning to comprehend the complex cultural bases of vision. Critically, this turning point comes when he incorporates previous knowledge to construct his understanding. At this stage he is not quite aware of the implications of someone 'seeing' with ears and nose, but the phrase 'how powerful is our mind' is a

significant entry to the understanding of the cultural bases underlying ways of seeing Australia. This was a beginning that could be built on by the instructor. But it was a beginning constructed by the student's incorporation of previous knowledge.

Turning Points

It became possible to tell when the learning outcomes were being reached by observing the emergence of active learning in the online discussion. This was particularly so when the Singaporean students constructed the requisite knowledge from their own experience. Throughout the discussions constructivist 'turning points' could be distinguished, at which the students reached learning outcomes by actively constructing the learning central to the course.

This learning construction could sometimes occur in a frivolous way, as we see here from a student who proved to be the mentor and driving force of the Singapore students.

> We often go through life "doing", "seeing", "hearing" and "feeling" things out of habits, which we actually don't intend to do or be conscious about! My personal experience it that I have a wife that is so tidy that very often annoys me. Everyday she simply goes about doing her routine out of habit more than necessity. No item is allowed to be misplaced in the house and that include children toys, so you can imagine the amount of shouting going on around the house every day! Well, this is just her way of seeing life! I certainly do not intend to see Australia through her way!

A much more significant example occurred during discussion of what proved to be an difficult, but ultimately extremely productive topic. This topic was based on a complex essay on the Eurocentric bases of the Mercator projection map. While the content proved to be very difficult for this class, other content was sacrificed so that the link between the map and ways of seeing the world could be confirmed. The discussion threads provide a concrete record of the gradual movement from the idea of a map as a simple description of the real world, to the concept of the map as based on the cultural phenomenon of Eurocentrism.

One turning point was significant for the whole class. The following comment is from the student most ready to go beyond the confines of the material. It represents the kind of moment that teachers look for, and which are all too hard to isolate or analyze in oral discussion.

> I am still looking for the Japanese map of the world which put Japan at the centre mentioned in Message:142. However, I managed to view a 12th Century map of the world which is called a "T and O" map. The world it portrays is a circle, divided by a T-shaped cross, the center of which is in Jerusalem. The circle represents perfection; the world as the object of God's affection. The world is divided into three continents, named after the sons of Noah. This map represented the Church's truth. It conveyed everything important to know for those who lived in a world where nature was unfolding according to God's plan.
> I will try to look for the Japanese map as mentioned.

The student has actively constructed knowledge of the cultural bases of maps by means of a cultural comparison that is germane to his own experience but also critical in the progression of the whole class towards the learning outcomes.

It is moments like these that the instructor can justifiably say "Bingo!" Fascinatingly, it wasn't until I was reviewing the postings on the second reading that I realized just how significant the turning point had been. The review of written responses was crucial in both diagnosis and a perception of the gradual achievement of the learning outcomes.

Evaluation

An evaluation questionnaire was completed at the end of the course. Questions relating to content and online discussion are included below.

The online discussion and group learning tasks elicited a strong favorable response (see Table 1). While the content itself was regarded as difficult by this cohort, the online discussion meant that students felt that their learning had been facilitated. Typical responses were:

> I am very satisfied with the online Group Project method of learning. It was something very new to me and my group members. I would not have acquired such a method of learning if not for this online Group Project. Thank you.
>
> I am happy with the group learning tasks. I enjoyed working with the other group members.

Consequently, although content was often regarded as difficult, the response to the content was very positive.

Strongly agree	SA
Agree	A
Not sure/does not apply	NS
Disagree	D
Strongly disagree	SD

Q		SA	A	US	D	SD
9	The online discussions enabled me to exchange information and ideas with the tutor and other students.	5	1			
10	The computer conference discussions helped me learn more about the subject than I would have learned working on my own.	4	1			
11	I worked closely with other students on the group learning tasks.	2	3	1		
12	I learned a lot from other students while working on the group learning tasks	2	3	1		

Table 1 Student feedback on online collaboration

Although the content was reduced the responses to the questionnaire confirmed the fact that the learning outcomes were met by allowing longer time to discuss difficult concepts (see Table 2).

> When I enrolled for this subject, I thought Seeing Australia was a 'holiday subject' not requiring any effort to learn new concepts. It was in the thick of the subject that I learned that Seeing is not necessarily what I used to think but a whole new concept which I never knew existed.

Q		SA	A	US	D	SD
14	I found the subject matter interesting	4	2			
15	The course helped me understand the concept of 'seeing' in a new way.	6				
16	The course helped me understand a lot more about Australia.	3	3			

Table 2 Student feedback on learning from the course

Conclusion

Courses taught in the Humanities are extremely amenable to the active construction of knowledge because they do not come with ready-made answers. Skills of analysis and discernment are crucial to the nature of the knowledge these courses present. Nevertheless active learning is habitually discouraged by an obsession with content which is usually held to be synonymous with learning. The presentation of courses online enhances the processes of active learning because the need to write postings and the length of time allowed to consider content, increases reflection and engagement, and provides a ready-made diagnostic tool for the instructor's evaluation of the learning process. But the course, 'Seeing Australia,' also demonstrates that high level cognitive skills can be achieved by

students of all abilities if content is subordinated to learning outcomes. The written record provides examples of turning points in the students' learning at which major advances were made as they found the skills required by the course by moving outside the content to engage the material in a more culturally familiar context. These turning points no doubt occur in all teaching, but the written record of online discussion provides confirmation that turning points occur when the learning is constructed as authentic for, and by the student.

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